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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,727	08/17/2006	Ulrich Riegel	29827/42263	9526
4743 7590 07/06/2010 MARSHALL, GERSTEIN & BORUN LLP 233 SOUTH WACKER DRIVE 6300 WILLIS TOWER CHICAGO, IL 60606-6357			EXAMINER GILLESPIE, BENJAMIN	
			ART UNIT	PAPER NUMBER
			1796	
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			07/06/2010 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/589,727

Applicant(s)

RIEGEL ET AL.

Examiner

BENJAMIN J. GILLESPIE

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 23-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Note

1. The current office action contains the same ground of rejection as previously set forth in the non-final office action mailed 12/21/2009. Thus it is proper to make the current action FINAL.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Obviousness Rejection I

2. **Claims 1, 3-15, 23-25, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al (U.S. Patent 5,797,893) in view of Abuelyaman et al (2001/0020062), Tomalia et al (U.S. Patent 4,507,466), and Wada et al (2004/0048955).
3. **Regarding claims 1, 3-15, 23-25, and 27:** The ground of rejection has been set forth in paragraphs 4-16 of the non-final office action mailed 12/21/2009 and is herein incorporated by reference.

Obviousness Rejection II

4. **Claims 2 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al ('893) in view of Abuelyaman et al ('062), Tomalia et al ('466), Wada et al ('955), and Hult et al (U.S. Patent 5,418,301).

5. **Regarding claims 2 and 26:** The ground of rejection has been set forth in paragraphs 18-20 of the non-final office action mailed 12/21/2009 and is herein incorporated by reference.

Obviousness Rejection III

6. **Claims 16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et al ('893) in view of Abuclyaman et al ('062), Tomalia et al ('466), Wada et al ('955), and Goldman et al (U.S. Patent 5,562,646).

7. **Regarding claims 16 and 17:** The ground of rejection has been set forth in paragraphs 22-24 of the non-final office action mailed 12/21/2009 and is herein incorporated by reference.

Response to Arguments

8. Applicant's arguments, filed 5/10/2010, with respect to the rejection of claims 1-17 and 23-27 have been considered but are not persuasive. Applicants argue the claimed invention is not rendered obvious by the prior art because Wada et al ('893) fail to teach dendritic polymers, and it would not be obvious to cure this deficiency using the dendritic polymers of Abuclyaman et al or Tomalia et al.

9. Specifically, applicants state it would not be obvious to *replace* the polyamide-polyamine of Wada et al ('893) for the dendritic polymers of Abuclyaman et al because the relied upon motivation requires that said dendritic polymer comprise only hydroxyl groups, not amine groups.

10. Similarly, applicants argue that it would also not be obvious to use the dendritic polyamide-polyamine of Tomalia et al since these dendrimers have amine functionality, and the

motivation gleaned from Abuelyaman et al is not relevant to Tomalia et al since it only corresponds to dendrimers having hydroxyl functionality.

11. In response, it is noted that paragraphs [0053] and [0083] of Abuelyaman et al exemplify dendrimers based on *polyester*, and, therefore, the remaining nucleophilic functional groups are based on polyol. However, this should not be misconstrued as a teaching that the dendrimer of Abuelyaman et al can have *only* hydroxyl groups.

12. **Paragraph [0044] teaches that in addition to polyester, the dendritic polymer can be a polyamide**, which is commonly known within the art to be the reaction product of polycarboxylic acid and polyamine. One of ordinary skill would understand that when using polyamide instead of polyester, the replacement of polyol for polyamine as the nucleophilic species would result in an amine-functional dendrimer. Thus applicants' position that Abuelyaman et al fail to teach amine-functional dendrimers is not persuasive.

13. Still if applicants maintain that it would not be obvious to *replace* the dendrimers of claims 3 and 27 into Wada et al ('893), the examiner would like to point out that claim 1 merely requires hydrophilic dendrimers (regardless of whether they are modified or unmodified). Therefore, claim 1 is still rendered obvious since, at the least, it would be obvious to *combine* the composition of Wada et al ('893) with the dendrimers of Abuelyaman et al based on the motivation that the dendritic polymers are useful with water-insoluble compounds – which Wada et al ('893) requires.

14. Finally, applicants argue that claim 7 is patentable over the prior art because it would not be obvious to arrive at both the diameter and wall thickness limitations. In response, wall thickness and sphere diameter are two basic parameters used to select the desired type of hollow

sphere. The examiner maintains that one of ordinary skill would understand the relationship between both parameters, i.e., achieving the desired density and mechanical strength. Furthermore, applicants have not provided any data showing an unexpected advantage gained when operating at the claimed limitations.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

16. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN J. GILLESPIE whose telephone number is (571)272-2472. The examiner can normally be reached on 8am-5:30pm.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 1796

/Benjamin J Gillespie/
Examiner, Art Unit 1796